Post-Baccalaureate Certificate in Cyber-Physical Systems

About This Program

Post-Baccalaureate Certificate in Cyber-Physical Systems provides graduate students with a comprehensive knowledge of cyber-physical systems that feature a tight integration of computation and physical components. Topics covered include model-based and data-driven solutions for CPS, co-design techniques that address a variety of computation, networking, control, and physical constraints in real systems, and related software, hardware, and middle issues. This program aims at the dual goal of providing the local aviation and defense industries with a workforce knowledgeable of cyber physical systems and offering career advancement opportunities for their employees.

Competencies

1. Upon completion, students will be able to model, analyze, and control cyber-physical systems.
2. Upon completion, students will be able to apply data-driven analytical tools and intelligent control systems to manage cyber-physical systems.
3. Upon completion, students will be able to understand the relationships between cyber-physical systems, the internet of things, intelligent transportation systems, and robot networking.

Admissions Criteria

Existing students may earn this certificate by completing the required courses and submitting a Request for Certificate to the UTA Office of Records. Non-degree seeking students must satisfy the admission requirements established by the Graduate School for special non-degree-seeking and graduate certificate applicants (https://catalog.uta.edu/academicregulations/admissions/graduate/#text).

Unconditional Admission is granted if all the following conditions are met:

- A bachelor's degree in an engineering with a minimum GPA of 3.0 or a current enrollment in an engineering master's program at UTA with a minimum GPA of 3.0.
- Those who desire the certificate program without enrolling in graduate degree program must be admitted to UTA as a non#degree certificate-seeking student.
- If English is not the applicant's native language, he/she should meet the EE admission requirement on TOEFL iBT, or IELTS. International applicants who have successfully completed a BS or MS from an institution in the United States and are not seeking funding as a Graduate Teaching Assistant, are not required to meet this requirement.

Remedial work may be required for applicant without an engineering or science background.

Curriculum

Foundations		
EE 5304	CYBER-PHYSICAL SYSTEMS	3
EE 6353	CONVEX OPTIMIZATION FOR ENGINEERS	3
Specialization		
Select 2 from the following:		6
EE 5307	LINEAR SYSTEMS ENGINEERING	
EE 5321	OPTIMAL CONTROL	
EE 5322	INTELLIGENT CONTROL SYSTEMS	
Total Hours		**12**

Program Completion

All courses used to satisfy the certificate requirements must be passed with a grade of B or better. The time limit for completion of the Certificate Program is 6 years.

Degree seeking students who successfully complete the certificate program will be eligible to continue their studies to earn a Master of Science in Electrical Engineering (MSEE) with a focus in cyber-physical systems, and the courses that are completed in the certificate program can be used to satisfy the course requirements the MSEE program

Advising Resources

EE Advising - General information

ELECTRICAL ENGINEERING

Location:

Master's - NH 531

Ph.D. - NH 545

Email:

ee_grad_advising@uta.edu

Phone:

Master's - 817-272-3423

Ph.D. - 817-272-3472

Web:

Master's - Schedule graduate advising (https://outlook.office365.com/owa/calendar/EEGradAdv@bookings.uta.edu/bookings/s/W_X-t8ySDEaqCfz09loAMg2/)

Ph.D. - Schedule graduate advising (https://outlook.office365.com/owa/calendar/EEGradAdv@bookings.uta.edu/bookings/s/ja39PnPrvEC3KPK1JroI9A2/)